



Pediatric vasoocclusive crisis and weather conditions

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Abstract:

BACKGROUND: Previous studies have demonstrated associations of frequency of vasoocclusive crisis with weather conditions in adults, although relationships have been inconsistent. **OBJECTIVES:** Our objective was to determine if there is an association between weather conditions and pediatric emergency department (ED) visits, hospital admissions, and day and severity of pain precipitation for vasoocclusive crisis (VOC). **METHODS:** A retrospective observational study was performed at a large tertiary care pediatric center. We reviewed health records of all VOC patients under the age of 18 years with a chief complaint of pain and performed correlations between daily and average weekly and monthly weather conditions and frequency of painful crises. **RESULTS:** A total of 430 visits for VOC to the ED were documented from January 2005 to December 2006. Significant correlations were noted between the daily and weekly number of painful crises and colder temperatures (rhoEuro Surveillance (Bulletin European Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)-0.11, pEuro Surveillance (Bulletin European Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)0.004 for daily data and rEuro Surveillance (Bulletin European Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)0.25, pEuro Surveillance (Bulletin European Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)0.01 weekly) and wind speed (rhoEuro Surveillance (Bulletin European Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)0.13, p

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Resource Description

Communication: ☒

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☒

audience to whom the resource is directed

Health Professional

Exposure : ☒

weather or climate related pathway by which climate change affects health

Climate Change and Human Health Literature Portal

Meteorological Factors, Meteorological Factors, Temperature

Temperature: Fluctuations

Geographic Feature: ☒

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☒

resource focuses on specific location

Non-United States

Non-United States: Non-U.S. North America

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Cardiovascular Effect

Cardiovascular Effect: Other Cardiovascular Effect

Cardiovascular Disease (other): vasoocclusive crisis

Medical Community Engagement: ☒

resource focus on how the medical community discusses or acts to address health impacts of climate change

A focus of content

Mitigation/Adaptation: ☒

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: ☒

populations at particular risk or vulnerability to climate change impacts

Children

Resource Type: ☒

format or standard characteristic of resource

Research Article

Timescale: ☒

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☒



resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content